



015118-6SQ.ST25.txt
SEQUENCE LISTING

<110> RAJAMOHAN, GOVINDAN
DAHIYA, MONIKA
PATHANIA, RANJANA
DIKSHIT, KANAK LATA

<120> A method for oxygen regulated production of recombinant staphylokinase

<130> U 015118-6

<140> 10/814,850
<141> 2004-03-31

<150> US 60/459,439
<151> 2003-04-01

<160> 14

<170> PatentIn version 3.3

<210> 1

<211> 161

<212> DNA

<213> Artificial Sequence

<220>
<223> A nucleotide sequence of expression cassette OXY-1

<400> 1
gatcaagctt atcatcgata agcttacagg acgcgtgggtt aaaagtattt gagttttgat 60
gtggattaag ttttgagagg tcaataagat tataatatgt gatgcttcac aattctgatg 120
tatggcaaaa ccataataat gaacttaagg aagacctcat g 161

<210> 2

<211> 582

<212> DNA

<213> Artificial Sequence

<220>
<223> A modified staphylokinase SAK-2 gene

<220>
<221> CDS
<222> (16)..(408)

<220>
<221> misc_feature
<222> (18)..(18)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (24)..(24)
<223> n is a, c, g, or t

<400> 2
gaacttaagc atatg gcg gga gcn tat aaa aag ggc gat gac gcg agt tat 51
Page 1

015118-6SQ.ST25.txt

Ala Gly Ala Tyr Lys Lys Gly Asp Asp Ala Ser Tyr 1 5 10	
ttt gaa cca aca ggc ccg tat ttg atg gta aat gtg act gga gtt gat Phe Glu Pro Thr Gly Pro Tyr Leu Met Val Asn Val Thr Gly Val Asp 15 20 25	99
ggt aaa gga aat gaa ttg cta tcc cct cat tat gtc gag ttt cct att Gly Lys Gly Asn Glu Leu Leu Ser Pro His Tyr Val Glu Phe Pro Ile 30 35 40	147
aaa cct ggg act aca ctt aca aaa gaa aaa att gaa tac tat gtc gaa Lys Pro Gly Thr Thr Leu Thr Lys Glu Lys Ile Glu Tyr Tyr Val Glu 45 50 55 60	195
tgg gca tta gat gcg aca gca tat aaa gag ttt aga gta gtt gaa tta Trp Ala Leu Asp Ala Thr Ala Tyr Lys Glu Phe Arg Val Val Glu Leu 65 70 75	243
gat cca agc gca aag atc gaa gtc act tat tat gat aag aat aag aaa Asp Pro Ser Ala Lys Ile Glu Val Thr Tyr Asp Lys Asn Lys Lys 80 85 90	291
aaa gaa gaa acg aag tct ttc cct ata aca gaa aaa ggt ttt gtt gtc Lys Glu Glu Thr Lys Ser Phe Pro Ile Thr Glu Lys Glu Phe Val Val 95 100 105	339
cca gat tta tca gag cat att aaa aac cct gga ttc aac tta att aca Pro Asp Leu Ser Glu His Ile Lys Asn Pro Gly Phe Asn Leu Ile Thr 110 115 120	387
aag gtt gtt ata gaa aag aaa taaaacaaaa tagttgttta ttatagaaaag Lys Val Val Ile Glu Lys Lys 125 130	438
taatgtcttg attgaatatg ttagtgaaa ttatcttca tcaaattctc attcatgcac gaatggttct gccccaccta atcagatatt acgtgactta tggggagaaa tcagtttggaa taaaagtggaa ggatccagta gccc	498 558 582

<210> 3
<211> 131
<212> PRT
<213> Artificial Sequence

<220>
<223> A peptide sequence of modified staphylokinase SAK-2 gene

<400> 3

Ala Gly Ala Tyr Lys Lys Gly Asp Asp Ala Ser Tyr Phe Glu Pro Thr
1 5 10 15

Gly Pro Tyr Leu Met Val Asn Val Thr Gly Val Asp Gly Lys Gly Asn
20 25 30

Glu Leu Leu Ser Pro His Tyr Val Glu Phe Pro Ile Lys Pro Gly Thr
35 40 45

015118-6SQ.ST25.txt

Thr Leu Thr Lys Glu Lys Ile Glu Tyr Tyr Val Glu Trp Ala Leu Asp
50 55 60

Ala Thr Ala Tyr Lys Glu Phe Arg Val Val Glu Leu Asp Pro Ser Ala
65 70 75 80

Lys Ile Glu Val Thr Tyr Tyr Asp Lys Asn Lys Lys Lys Glu Glu Thr
85 90 95

Lys Ser Phe Pro Ile Thr Glu Lys Gly Phe Val Val Pro Asp Leu Ser
100 105 110

Glu His Ile Lys Asn Pro Gly Phe Asn Leu Ile Thr Lys Val Val Ile
115 120 125

Glu Lys Lys
130

<210> 4
<211> 37
<212> DNA
<213> Artificial Sequence

<220>
<223> A primer SAK-1 for amplification

<400> 4
gattgttagcc atatgtcaag ttcattcgac aaaggaa

37

<210> 5
<211> 37
<212> DNA
<213> Artificial Sequence

<220>
<223> An oligonucleotide primer SAK-2

<400> 5
cggctactgg atcctccact tttatccaaa ctgattt

37

<210> 6
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> An oligonucleotide primer SAK-3

<400> 6
gaacttaagg aagatataca tatgtcaagt tcattcgaca aagga

45

<210> 7
<211> 36

015118-6SQ.ST25.txt

<212> DNA
<213> Artificial Sequence

<220>
<223> An oligonucleotide primer SAK-4

<400> 7
gaacttaagc atatggctgg agcttataaaa aagggc

36

<210> 8
<211> 411
<212> DNA
<213> Staphylococcus aureus

<400> 8
tcaagttcat tcgacaaaagg aaaatataaa aagggcgatg acgcgagtta ttttgaacca 60
acaggccgt atttgcgtt aaatgtgact ggagttgatg gtaaaggaaa tgaattgcta 120
tcccctcatt atgtcgagtt tcctattaaa cctgggacta cacttacaaa agaaaaaatt 180
gaataactatg tcgaatgggc attagatgct acagcatata aagagtttag agtagttgaa 240
ttagatccaa gcgcaaagat cgaagtcact tattatgata agaataagaa aaaagaagaa 300
acgaagtctt tccctataac agaaaaaggt ttgttgtcc cagatttac agagcatatt 360
aaaaaccctg gattcaactt aattacaaag gttgttatag aaaagaaata a 411

<210> 9
<211> 606
<212> DNA
<213> Artificial Sequence

<220>
<223> A staphylokinas SAK gene with primer and terminator sequences

<400> 9
gaacttaagg aagatataca tatgtcaagt tcattcgaca aaggaaaaata taaaaaggc 60
gatgacgcga gttatttga accaacaggc ccgtatttga tggtaaatgt gactggagtt 120
gatggtaaag gaaatgaatt gctatcccct cattatgtcg agtttcctat taaacctgg 180
actacactta caaaagaaaa aattgaatac tatgtcgaat gggcattaga tgcgacagca 240
tataaagagt ttagagtagt tgaatttagat ccaagcgcaa agatcgaagt cacttattat 300
gataagaata agaaaaaaga agaaacgaag tctttcccta taacagaaaa aggtttgtt 360
gtccccagatt tatcagagca tattaaaaac cctggattca acttaattac aaagggtt 420
atagaaaaga aataaaaacaa aatagttgtt tattatgaa agtaatgtct tgattgaata 480
tgtgtagtga aattatcttt catcaaattc tcattcatgc acgaatggtt ctgccccacc 540
taatcagata ttacgtgact tatggggaga aatcagttt gataaaaagtg gaggatccag 600
tagccg 606

015118-6SQ.ST25.txt

<210> 10
<211> 377
<212> PRT
<213> Staphylococcus aureus

<400> 10

Ser Glu Arg Ser Glu Arg Ser Glu Arg Pro His Glu Ala Ser Pro Leu
1 5 10 15

Tyr Ser Gly Leu Tyr Leu Tyr Ser Thr His Arg Leu Tyr Ser Leu Tyr
20 25 30

Ser Gly Leu Tyr Ala Ser Pro Ala Ser Pro Ala Leu Ala Ser Glu Arg
35 40 45

Thr Tyr Arg Pro His Glu Gly Leu Pro Arg Thr His Arg Gly Leu Tyr
50 55 60

Pro Arg Thr Tyr Arg Leu Glu Met Glu Thr Val Ala Leu Ala Ser Asn
65 70 75 80

Val Ala Leu Thr His Arg Gly Leu Tyr Val Ala Leu Ala Ser Pro Gly
85 90 95

Leu Tyr Leu Tyr Ser Gly Leu Tyr Ala Ser Asn Gly Leu Leu Glu Leu
100 105 110

Glu Ser Glu Arg Pro Arg His Ile Ser Thr Tyr Arg Val Ala Leu Gly
115 120 125

Leu Pro His Glu Pro Arg Ile Leu Glu Leu Tyr Ser Pro Arg Gly Leu
130 135 140

Tyr Thr His Arg Thr His Arg Leu Glu Thr His Arg Leu Tyr Ser Gly
145 150 155 160

Leu Leu Tyr Ser Ile Leu Glu Gly Leu Thr Tyr Arg Thr Tyr Arg Val
165 170 175

Ala Leu Gly Leu Thr Arg Pro Ala Leu Ala Leu Glu Ala Ser Pro Ala
180 185 190

Leu Ala Thr His Arg Ala Leu Ala Thr Tyr Arg Leu Tyr Ser Gly Leu
195 200 205

Pro His Glu Ala Arg Gly Val Ala Leu Val Ala Leu Gly Leu Leu Glu
210 215 220

015118-6SQ.ST25.txt

Ala Leu Ala Pro Arg Ser Glu Arg Ala Leu Ala Leu Tyr Ser Ile Leu
 225 230 235 240

Glu Gly Leu Val Ala Leu Thr His Arg Thr Tyr Arg Thr Tyr Arg Ala
 245 250 255

Ser Pro Leu Tyr Ser Ala Ser Asn Leu Tyr Ser Leu Tyr Ser Gly Leu
 260 265 270

Gly Leu Thr His Arg Thr His Arg Leu Tyr Ser Ser Glu Arg Pro His
 275 280 285

Glu Pro Arg Ile Leu Glu Thr His Arg Gly Leu Leu Tyr Ser Gly Leu
 290 295 300

Tyr Pro His Glu Val Ala Leu Val Ala Leu Pro Arg Ala Ser Pro Leu
 305 310 315 320

Glu Ser Glu Arg Gly Leu His Ile Ser Ile Leu Glu Leu Tyr Ser Ala
 325 330 335

Ser Asn Pro Arg Gly Leu Tyr Pro His Glu Ala Ser Asn Leu Glu Ile
 340 345 350

Leu Glu Thr His Arg Leu Tyr Ser Val Ala Leu Val Ala Leu Ile Leu
 355 360 365

Glu Gly Leu Leu Tyr Ser Leu Tyr Ser
 370 375

<210> 11

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> An oligonucleotide PEC-1 for protein expression cassette

<400> 11

gatcaagctt atcatcgata agcttacagg acgctgggtt aaaagtattt 50

<210> 12

<211> 55

<212> DNA

<213> Artificial Sequence

<220>

<223> An oligonucleotide PEC-2 for preparing protein expression cassette

<400> 12

atcttattga cctctcaaaa cttaatccac atcaaaactc aaatactttt aaccc 55

015118-6SQ.ST25.txt

<210> 13
<211> 55
<212> DNA
<213> Artificial Sequence

<220>
<223> An oligonucleotide PEC-3 for preparing protein expression cassette

<400> 13
agaggtcaat aagattataa tatgtgatgc ttcacaattc tgatgtatgg caaaa 55

<210> 14
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> An oligonucleotide PEC-4 for preparing protein expression cassette

<400> 14
atgaggtctt ccttaagttc attattatgg ttttgccata catcagaatt 50